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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,504	08/26/2003	Yasushi Sano	M1071.1857/P1857	2711

7590 11/30/2004
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EXAMINER


HAM, SEUNGSOOK

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/647,504	SANO ET AL.	
	Examiner	Art Unit	
	Seungsook Ham	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 2-5, 7-10, 12-15 and 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 11 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/26/03, 3/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Species I, figures 1, 2, 4A, 5A, 6A, 7A, and 14 in the reply filed on November 8, 2004 is acknowledged.

Claims 2-5, 7-10, 12-15, and 17-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species II-VII, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on November 8, 2004.

It should be noted that claims 2 and 12(Species III), claims 3 and 13 (Species IV) are also withdrawn from further consideration as being drawn to a nonelected Species. Moreover, claims 6 and 16 (see fig. 14) will be considered as elected Species I.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

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and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kayano et al. (US '854).

Kayano et al. (fig. 18) discloses a parallel multistage band-pass filter comprising: a plurality of resonators having adjacent resonance frequencies 115-117 connected in parallel to each other between an input terminal 11 and an output terminal 12; a first transmission line 119 having an electrical length of half of a wavelength of a transmission signal (col. 6, lines 39-47) incorporated between a first port on an input

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terminal side of a $(2n-1)$ th resonator 115 of the plurality of resonators; and a second port on an input terminal side of a $(2n)$ th resonator 116 of the plurality of resonators; a second transmission line 120 having an electrical length of half of a wavelength of the transmission signal incorporated between a third port on an output terminal side of the $(2n)$ th resonator 116 of the plurality of resonators, and a fourth port on an output terminal side of a $(2n+1)$ th resonator 117 of the plurality of resonators.

Regarding claim 11, Kayano et al. (fig. 18) also shows the first transmission line 118 incorporated between the output terminal side of a $(2n-1)$ th resonator 115 and a $(2n)$ resonator 116; and a second transmission line 119 incorporated between the input terminal side of the $(2n)$ th resonator 116 and a $(2n+1)$ th resonator 117.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Wakino et al. (US '096).

Wakino et al. (fig. 2(a)) discloses a parallel multistage band-pass filter comprising: a plurality of resonators having adjacent resonance frequencies 21-23 connected in parallel to each other between an input terminal T1 and an output terminal T2; a first transmission line TL2 having an electrical length of half of a wavelength of a transmission signal incorporated between a first port C on an input terminal side of a $(2n-1)$ th resonator 23 of the plurality of resonators; and a second port B on an input terminal side of a $(2n)$ th resonator 22 of the plurality of resonators; a second transmission line TL4 having an electrical length of half of a wavelength of the transmission signal incorporated between a third port E on an output terminal side of the

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(2n)the resonator 22 of the plurality of resonators, and a fourth port D on an output terminal side of a (2n+1)th resonator 21 of the plurality of resonators.

Regarding claim 11, Wakino et al. (fig. 2(a)) also shows the first transmission line TL4 incorporated between the output terminal side of a (2n-1)th resonator 21 and a (2n) resonator 22; and a second transmission line TL1 incorporated between the input terminal side of the (2n)th resonator 22 and a (2n+1)th resonator 23.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kayano et al. (US '854) or Wakino et al. (US '096) in view of Dao (US '370).

Kayano et al. and Wakino et al. do not show the half wavelength transmission line is a lumped constant line having an inductance element and a capacitance element. However, it is well known in the art to substitute a transmission line with lumped elements. Dao (fig. 6) discloses a using lumped element instead of a transmission line. Therefore, it would have been obvious to one of ordinary skill in the art to substitute at least one of first and second transmission lines with a lumped inductance element and a capacitance element in the device of Kayano et al. or Wakino et al. since they are functionally equivalent as taught by Dao.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakano (US '427) and Nakahara (US '421) disclose a method of replacing lumped elements with a transmission line.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham
Primary Examiner
Art Unit 2817

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